Adding & Subtracting Fractions & Mixed Numbers – BLACK

**Answer the following questions in your notebook. Show your work.**

1.  of the children in the music hall are boys. If there are 84 more girls than boys in the music hall, many children are there altogether?
2. Julie bought some biscuits. Her sons received  of them and her daughters  of the remaining biscuits. If Julie had 32 biscuits left, how many biscuits did she buy at first?
3. In a pet shop, the number of rabbits is  of the number of hamsters. The number of mice is  of the number of hamsters. If there are rabbits, hamsters and mice altogether, how many hamsters are there?
4. Ms. Ahoy had a ball of ribbon. After cutting 6 m of the ball of ribbon to tie up some parcels, she cut the remaining ribbon into 12 equal pieces. If each piece of ribbon was  m long, what was the length of the ball of ribbon?
5.  of the fruits Mr. Sadek bought for his fruit stall are apples,  of them are mangoes and  of the remainder are oranges. The remaining are 4 pineapples. How many frites did Mr. Sadek buy altogether?
6. A painter painted  of a rectangular wall 2 days ago. He painted  of the remaining wall yesterday. If he painted  of the wall this morning, how much of the wall remains unpainted?
7. Alex collected 320 trading cards. He gave 180 trading cards to his siblings and 56 trading cards to his best friend. If he lost  of the remaining trading cards, how many trading cards had he left?
8. A container contains red, blue and yellow marbles. The mass of red marbles is kg. The mass of the blue marbles is  kg more than the mass of the red marbles. If the total mass of red, blue and yellow marbles is 5kg, what is the mass of yellow marbles in the container?

**Black Homework Solutions**

1. There are 308 children all together..

4/11 are boys, then 7/11 are girls.

The difference between girls and boys is 84, then 7/11 – 4/11 = 3/11 = 84

3/11 = 84 so 1/11 = 28

11/11 is 11 x 28 = 308

1. She bought 120 biscuits at first.

1 – 2/5 = 3/5

5/9 x 3/5 = 1/3

Her daughters received 1/3 of the biscuits.

1 – 2/5 – 1/3 = 15/15 – 6/15 – 5/15 = 4/15

4/15 is 32 biscuits

1/15 is 8 biscuits

15/15 is 15 x 8 = 120

1. There are 28 hamsters

The number of hamsters is equal to the common denominator of 3/7 and 1/4: 28

3/7 of 28 = 12 (number of rabbits)

1/4 of 28 = 7 (number of mice)

7 + 12 + 28 = 47 in total.

1. The length of the ball of ribbon was  m

12 x 3/5 m = 36/5 = 7 1/5 m

7 1/5 + 6 = 13 1/5 m

1. Mr. Sadek bought 54 fruits all together

1 – 5/9 – 1/3 = 1/9

1/3 x 1/9 = 1/27

1/9 – 1/27 = 2/27

2/27 is 4 so 1/27 is 2

27/27 is 27 x 2 = 54

1.  of the wall remains unpainted

1 – 5/12 = 7/12

1/7 x 7/12 = 1/12 (he painted 1/12 of the wall yesterday)

1 – (5/12 + 1/12 + 3/12)

= 1 – 9/12

= 1/4

1. He had 60 trading cards

320 – 180 -56 = 84

7/7 = 1 is 84 cards

1/7 = 12

1 – 2/7 = 5/7

5 x 12 = 60

1. The mass of the yellow marbles is kg

1/4 + 1/8 = 1 3/8 kg (the mass of the blue marbles)

5 kg – (1 1/8 + 1 3/8 kg)

= 5 – 2 1/2 kg

= 2 1/2 kg